A Model for Distributed Vocabulary Translation

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Outcomes research is just one of the potentially valuable results of adopting standards that will allow data sharing of electronic medical records systems. A large amount of valuable data exists in multiple systems developed for focused problems of small populations of patients. Typically these small systems include include development of a local small-vocabulary. Adoption of standards and translation of these small-vocabularies is problematic for these developers since they may lack expertise or resources to make use of the tools needed by large institutions to make these same conversions. We implemented a model of distributed vocabulary translation. This model requires large institutions to maintain large standard vocabularies and requires small-vocabulary users to make minimal links into these vocabularies. Small users would be able to take advantage of the same benefits of standardization that large institutions seek. Our results show that the distributed model was predictably less efficient at communicating terms translations. However, this loss of efficiency was minimal and we believe out-weighed by a gain in institutional efficiency and by the model's ability to attract many small-vocabulary users whose total data would be a significant percentage of patient care data.

0195—4210/96/$5.00